

## CLAIMS

What is claimed and desired to be secured by Letters Patent is:

1. A modem comprising:  
memory adapted to store a plurality of PRBS generator definitions; and  
circuitry adapted to determine an operating environment of the modem,  
and to select one of the plurality of PRBS generator definitions based on the operating environment.
2. The modem according to claim 1, wherein the circuitry includes the memory.
3. The modem according to claim 1, wherein the circuitry comprises measuring circuitry.
4. The modem according to claim 3, wherein the measuring circuitry comprises a processor.
5. The modem according to claim 1, wherein the operating environment of the modem comprises at least one channel condition.
6. The modem according to claim 1, wherein the operating environment of the modem comprises a preselected criterion.
7. A communication system comprising:  
a communication node having circuitry adapted to determine an operating environment of the communication node; and  
a management information node adapted to control the communication node based on the operating environment and a plurality of stored PRBS generator definitions.

8. The system according to claim 7, wherein the circuitry comprises memory for storing the plurality of PRBS generator definitions.

9. The system according to claim 7, wherein the circuitry comprises measuring circuitry.

10. The system according to claim 9, wherein the measuring circuitry comprises a processor.

11. The system according to claim 7, wherein the operating environment of the modem comprises at least one channel condition.

12. The system according to claim 7, wherein the operating environment of the modem comprises a preselected criterion.

13. The system of claim 7, wherein said plurality of PRBS generator definitions are stored on said management information node.

14. The system of claim 7, further comprising memory communicating with at least the management information node.

15. The system of claim 14, wherein said plurality of PRBS generator definitions are stored on said memory.

16. The system of claim 7, wherein said management information node comprises a MIB.

17. The system of claim 12 wherein the preselected criterion comprises a user selection.

18. A method of communication comprising:
  - determining an operating environment of a communication node; and
  - selecting, based on the measured environment, a PRBS generator from a plurality of stored PRBS generators.
19. The method as recited in claim 18, wherein determining an operating environment comprises measuring at least one channel condition.
20. The method as recited in claim 18, wherein determining an operating environment comprises obtaining a preselected criterion.
21. A method of communication comprising:
  - determining a number of carriers to be used by a communication node;
  - comparing the number of carriers determined to a threshold; and
  - selecting a first PRBS generator if the number of carriers determined is less than the threshold, and a second PRBS generator if the number of carriers determined is greater than the threshold.